

Claims

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I claim:

- 1) A continuously variable transmission having a longitudinal axis comprising;
a plurality of rollers, each having a tiltable axis of rotation, and each roller located radially outward from the longitudinal axis;
a drive disk annularly rotatable about the longitudinal axis and contacting a first point on each of rollers and having a first side facing the rollers and a second side facing away from the rollers;
a driven disk annularly rotatable about the longitudinal axis and contacting a second point on each of the rollers;
a tubular support member with a plurality of faces annularly rotatable about the longitudinal axis and capable of longitudinal movement along the longitudinal axis;
a set of roller support stanchions each with a first end and a second end, said first end being affixed to one of the tubular support member faces;
a set of rollers, each rotatably mounted to a first end of a roller support shaft, said roller support shaft being pivotally attached to said second end of a roller support stanchion.
a bearing disk annularly rotatable about the longitudinal axis, and adapted to provide rotational force to the drive disk;
at least one axial force generator, the axial force generator located between the drive disk and the bearing disk, the axial force generator configured to apply a component of axial force to the drive disk, thereby, improving the contact of the drive disk and the rollers as well as between the rollers and the driven disk.
- 2) the continuously variable transmission of claim 1 wherein the tubular support member is hexagonal in cross section.
- 3) the continuously variable transmission of claim 1 wherein the tubular support member is circular in cross section.
- 4) the continuously variable transmission of claim 1 wherein the tubular support member is oval in cross section.
- 5) the continuously variable transmission of claim 1 wherein the tubular support member is triangular in cross section.

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- 6) the continuously variable transmission of claim 1 wherein the stanchions are affixed to each face of the tubular support member.
- 7) the continuously variable transmission of claim 1 wherein the stanchions are affixed to less than all the faces of the tubular support member.
- 8) the continuously variable transmission of claim 1 wherein the stanchions are affixed to less than all of the faces of the tubular support member.
- 9) the continuously variable transmission of claim 1 wherein the stanchions are affixed to three faces of the tubular support member.
- 10) the continuously variable transmission of claim 9 wherein the tubular support member is hexagonal in cross section.
- 11) the continuously variable transmission of claim 10 wherein the three stanchions are attached to three faces of the tubular support member and are spaced equally about the longitudinal axis.